

Sexually Transmitted Disease Surveillance 2001

**Division of STD Prevention
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Division of STD Prevention
Atlanta, Georgia 30333

Centers for Disease Control and
PreventionJulie Louise Gerberding, M.D., M.P.H.
Director

National Center for
HIV, STD, and TB Prevention.....Harold W. Jaffe, M.D.
Acting Director

Division of STD Prevention.....Harold W. Jaffe, M.D.
Acting Director

Epidemiology and Surveillance
BranchStuart M. Berman, M.D., Sc.M.
Chief

Surveillance and Special Studies
Section.....Hillard S. Weinstock, M.D., M.P.H.
Chief

Statistics and Data Management
BranchOwen J. Devine, Ph.D.
Chief

Melinda L. Flock, M.S.P.H.
Unit Chief

Rose Horsley
Unit Chief

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Foreword

“STDs are hidden epidemics of enormous health and economic consequence in the United States. They are hidden because many Americans are reluctant to address sexual health issues in an open way and because of the biologic and social characteristics of these diseases. All Americans have an interest in STD prevention because all communities are impacted by STDs and all individuals directly or indirectly pay for the costs of these diseases. STDs are public health problems that lack easy solutions because they are rooted in human behavior and fundamental societal problems. Indeed, there are many obstacles to effective prevention efforts. The first hurdle will be to confront the reluctance of American society to openly confront issues surrounding sexuality and STDs. Despite the barriers, there are existing individual- and community-based interventions that are effective and can be implemented immediately. That is why a multifaceted approach is necessary to both the individual and community levels.

To successfully prevent STDs, many stakeholders need to redefine their mission, refocus their efforts, modify how they deliver services, and accept new responsibilities. In this process, strong leadership, innovative thinking, partnerships, and adequate resources will be required. The additional investment required to effectively prevent STDs may be considerable, but it is negligible when compared with the likely return on the investment. The process of preventing STDs must be a collaborative one. No one agency, organization, or sector can effectively do it alone; all members of the community must do their part. A successful national initiative to confront and prevent STDs requires widespread public awareness and participation and bold national leadership from the highest levels.”¹

¹ Concluding statement from the Institute of Medicine’s Summary Report, *The Hidden Epidemic: Confronting Sexually Transmitted Diseases*, National Academy Press, Washington, DC, 1997, p.43.

Preface

Sexually Transmitted Disease Surveillance, 2001 presents statistics and trends for sexually transmitted diseases (STDs) in the United States through 2001. This annual publication is intended as a reference document for policy makers, program managers, health planners, researchers, and others who are concerned with the public health implications of these diseases. The figures and tables in this edition supersede those in earlier publications of these data.

The surveillance information in this report is based on the following sources of data: (1) case reports from the STD project areas; (2) prevalence data from the Regional Infertility Prevention Program, the National Job Training Program (formerly the Job Corps), the Jail STD Prevalence Monitoring Projects, the Adolescent Women Reproductive Health Monitoring Project, the Men Who Have Sex With Men (MSM) Prevalence Monitoring Project, and the Indian Health Service; (3) sentinel surveillance of gonococcal antimicrobial resistance from the Gonococcal Isolate Surveillance Project (GISP); and (4) national sample surveys implemented by federal and private organizations.

The STD surveillance systems operated by state and local STD control programs, which provide the case report data, are the sources of many of the figures and all of the statistical tables in this publication. These systems are an integral part of program management at all levels of STD prevention and control in the United States. Because of incomplete diagnosis and reporting, the number of STD cases reported to CDC is less than the actual number of cases occurring among the United States population.

Sexually Transmitted Disease Surveillance, 2001 consists of four parts. The **National Profile** contains figures that provide an overview of STD morbidity in the United States. The accompanying text identifies major findings and trends for selected STDs. The **Special Focus Profiles** contain figures and text describing STDs in selected subgroups and populations that are a focus of national and state prevention efforts. The **Detailed Tables** provide statistical information about STDs at the state, county, city, and national levels. The **Appendix** includes the sources and limitations of the data used to produce this report. Included in this section, are Figures A1-A3 that show progress made by states in converting from hardcopy aggregate reporting to electronic line-listed data.

Selected figures and tables in this document identify goals that reflect progress towards some of the Healthy People 2010 (HP2010) national health status objectives for STDs.¹ **Appendix** Table A1 displays progress made towards the HP2010 Priority Area 25, for STDs. These objectives are used as reference points throughout this edition of *Sexually Transmitted Disease Surveillance, 2001*.

Any comments and suggestions that would improve the usefulness of future publications are appreciated and should be sent to Director, Division of STD Prevention, National Center for HIV, STD, and TB Prevention, Centers for Disease Control and Prevention, 1600 Clifton Road, Mailstop E-02, Atlanta, Georgia, 30333.

¹ U.S. Department of Health and Human Services. *Healthy People 2010*. 2nd ed. With Understanding and Improving Health and Objectives for Improving Health. 2 vols. Washington, DC: U.S. Government Printing Office, November 2000.

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Publication of this report would not have been possible without the contributions of the State and Territorial Health Departments and the Sexually Transmitted Disease Control Programs, the Regional Infertility Prevention Program, the U.S. Department of Labor and the Indian Health Service, which provided surveillance data to the Centers for Disease Control and Prevention.

This report was prepared by the following staff and contractors of the Division of STD Prevention, National Center for HIV, STD, and TB Prevention, Centers for Disease Control and Prevention: Stu Berman, Susan Bradley, Jim Braxton, Sharon Clanton, Susan Conner, Deblina Datta, Darlene Davis, Owen Devine, Linda Webster Dicker, Melinda Flock, LaZetta Grier, Alesia Harvey, James Heffelfinger, Rose Horsley, Kathleen Hutchins, Richard Kahn, Catherine McLean, Debra Mosure, Michael Phillips, LuEtta Schneider, Maya Sternberg, Katherine Stone, Emmett Swint, Susan Wang, Hillard Weinstock, and Akbar Zaidi.

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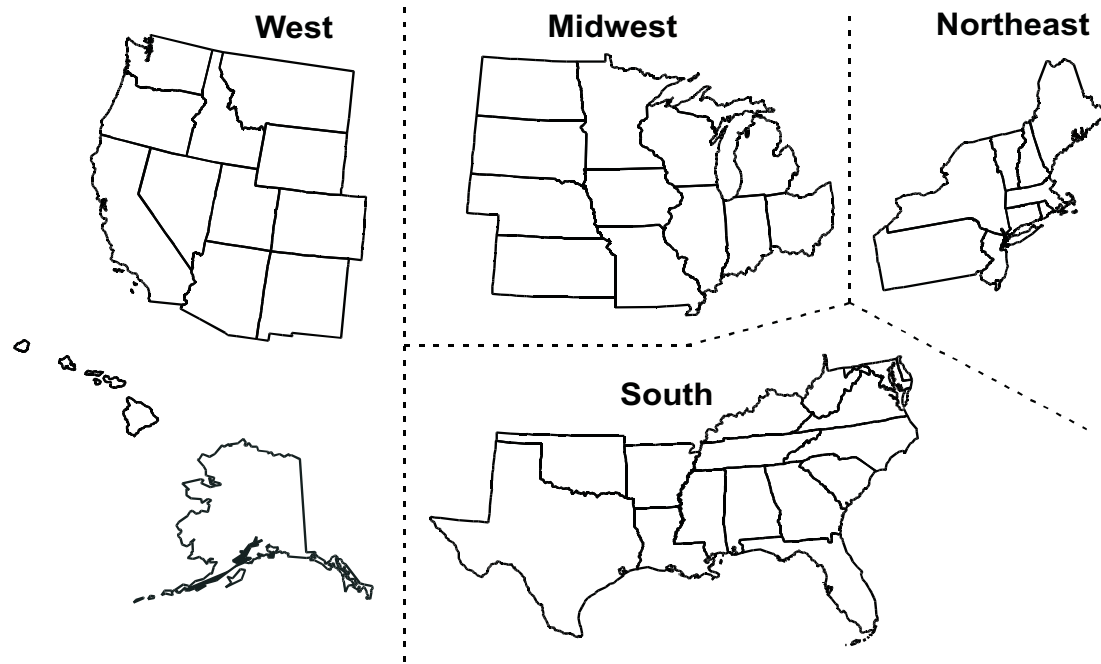
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Appendix

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Geographic Divisions of the United States



West

Alaska
Arizona
California
Colorado
Hawaii
Idaho
Montana
Nevada
New Mexico
Oregon
Utah
Washington
Wyoming

Midwest

Illinois
Indiana
Iowa
Kansas
Michigan
Minnesota
Missouri
Nebraska
North Dakota
Ohio
South Dakota
Wisconsin

South

Alabama
Arkansas
Delaware
District of Columbia
Florida
Georgia
Kentucky
Louisiana
Maryland
Mississippi
North Carolina
Oklahoma
South Carolina
Tennessee
Texas
Virginia
West Virginia

Northeast

Connecticut
Maine
Massachusetts
New Hampshire
New Jersey
New York
Pennsylvania
Rhode Island
Vermont

National Overview of Sexually Transmitted Diseases, 2001

The logo on the cover of *Sexually Transmitted Disease Surveillance, 2001* is a reminder of the multifaceted, national dimensions of the morbidity, mortality, and costs that result from sexually transmitted diseases (STDs) in the United States. It highlights the central role of STD prevention in improving health among women and infants and in promoting HIV prevention. Organized collaboration among interested, committed public and private organizations is the key to reducing STDs and their related health burdens in our population. As noted in the report of the Institute of Medicine, *The Hidden Epidemic: Confronting Sexually Transmitted Diseases*,¹ surveillance is a key component of our efforts to prevent and control these diseases.

This overview summarizes national surveillance data on the three diseases for which there are federally-funded control programs: chlamydia, gonorrhea, and syphilis. Several observations for 2001 are worthy of note.

Chlamydia

In 2001, 783,242 cases of genital *Chlamydia trachomatis* infection were reported to CDC (Table 1). This case count corresponds to a rate of 278.3 cases per 100,000 population, an increase of 10.4% compared with the rate of 252.1 in 2000. Rates of reported chlamydial infection among women have been increasing annually since the late 1980s when public programs for screening and treatment of women were first established to avert pelvic inflammatory disease and related complications. Chlamydia screening and reporting are likely to expand further in response to the recently implemented Health Plan Employer Data and Information Set (HEDIS) measure for chlamydia screening of sexually active women 15 to 25 years of age who are provided medical care through managed care organizations.² The increase in chlamydia case reports in 2001 most likely represents a continued increase in screening for this infection and also increased use of more sensitive chlamydia screening tests than used in prior years.

In 2001, the overall reported rate of chlamydial infection in the U.S. among women (435.2 cases per 100,000 females) was approximately four times the reported rate among men (113.9 cases per 100,000 males), reflecting the large number of women screened for this disease. However, with the increased availability of urine testing, men are increasingly being tested for chlamydial infection. From 1997 to 2001, the reported chlamydial infection rate in men increased by 61.6% (from 70.5 to 113.9 cases per 100,000 males) compared with a 27.3% increase in women over this period (from 341.8 to 435.2 cases per 100,000 females) (Tables 5 and 6).

Data from multiple sources on prevalence of chlamydial infection in defined populations have been useful in monitoring disease burden and guiding chlamydia screening programs. In 2001, the median state-specific chlamydia test positivity among women 15 to 24 years who were screened at selected family planning clinics in all states, the District of Columbia, Puerto Rico, and the Virgin Islands was 5.6% (range 2.7% to 13.9%) (Figure 7), and at selected prenatal clinics in 22 states and Puerto Rico, 7.4% (range 3.7% to 13.5%) (Figure F). For economically-disadvantaged women 16

to 24 years who entered the National Job Training Program in 2001, from 26 states and Puerto Rico, the median state-specific prevalence was 10.6% (range 5.1% to 18.0%) (Figure L). For women 15 to 30 years screened at Indian Health Service (IHS) clinics in four IHS areas, the prevalence ranged from 3.1% to 10.0% by area (Figure U). For adolescent women entering juvenile detention centers, the median chlamydia positivity by facility was 14.8% (range 4.0% to 25.8%) (Figure GG). It was 9.6% among women attending school-based clinics and 17.6% in street youth (Figure M). For adolescent men entering juvenile detention centers, the median chlamydia positivity was 5.3% by facility (range 1.6% to 11.5%) (Figure HH). Although these data on prevalence are not entirely comparable because of differences in the populations screened, in the performance characteristics of the screening tests, and variations in screening criteria, they provide important information on the continuing high burden of disease in the United States.

In parts of the United States where large scale chlamydia screening programs have been instituted, prevalence of disease has declined substantially. During 1988-2001, among 15-to 44-year-old women participating in the screening programs in Health and Human Services (HHS) Region X family planning clinics, chlamydia test positivity declined 59.2% (from 13.0% to 5.3%) (Figure 8). After adjusting trends in chlamydia positivity to account for changes in laboratory test methods and associated increases in test sensitivity, chlamydia test positivity decreased in five of 10 HHS regions from 2000 to 2001, increased in four regions, and remained the same in one. Although chlamydia positivity has declined in the past year in some regions, most likely due to the effectiveness of screening and treating women, continued expansion of screening programs to populations with higher prevalence of disease may have contributed to the increases in positivity seen in other regions. See the **Appendix** for the composition of the HHS regions.

Gonorrhea

Following a 73.8% decline in the reported rate of gonorrhea from 1975 (467.7) to 1997 (122.4), overall rates increased in 1998 (131.9) and have since remained essentially unchanged (Table 1). The gonorrhea rate for 2001 (128.5 cases per 100,000 population) was similar to the rates in 2000 (129.0 cases per 100,000 population) and 1999 (132.3 per 100,000 population) (Table 1). The 2001 rate for gonorrhea exceeds the Healthy People 2010 (HP2010) objective of 19 cases per 100,000 population.

The gonorrhea rate in the U.S. among women in 2001 was similar to the rate in 2000 (128.2 and 126.7 cases per 100,000 women, respectively) (Table 15). As in 2000, there were no significant sex differences in gonorrhea rates in 2001 (Tables 15 and 16). Since 1998, there has been little year-to-year change in the reported rates for most 5-year age categories. As with chlamydia, rates of gonorrhea in women are particularly high in 15- to 19-year-olds, and in men, are highest in the 20- to 24-year age group.

In 2001, data on gonorrhea prevalence in defined populations were available from several sources. These data showed a continuing high burden of disease in adolescents and young adults in parts of the United States. Among 15- to 24-year-old women attending selected family planning clinics in 34 states, the District of Columbia, Puerto Rico, and the Virgin Islands, the median state-specific gonorrhea prevalence was 1.0% (range 0.1 % to 3.2%) (Figure 15). For women in this age group attending selected prenatal clinics in 16 states, the median prevalence was 0.9% (range 0.0% to 4.3%) (Figure G). However, for 16- to 24-year-old women entering the National Job Training Program in 17 states and Puerto Rico in 2001, the median state-specific gonorrhea prevalence was 3.7% (range 0.7% to 8.1%) (Figure O).

Antimicrobial resistance in *Neisseria gonorrhoeae* remains a continuing concern. In the mid- to late 1990s, the prevalence of fluoroquinolone-resistant *N. gonorrhoeae* infections increased substantially in Asia and the Pacific Islands, including Hawaii; in 2001, increased numbers of fluoroquinolone-resistant *N. gonorrhoeae* infections were identified in California. Ciprofloxacin, levofloxacin, and ofloxacin are fluoroquinolone antibiotics that are recommended for treatment of gonorrhea by CDC except in areas where fluoroquinolone-resistance levels are found to be elevated. These oral antibiotics are inexpensive and effectively treat gonorrhea with a single dose. Nationally in 2001, 0.7% of *N. gonorrhoeae* isolates tested through the Gonococcal Isolate Surveillance Project (GISP) demonstrated resistance to ciprofloxacin, compared to 0.4% in 2000 and 0.1% in 1998. There is considerable geographic variation in the prevalence of fluoroquinolone-resistance within the U.S. Notably, in Honolulu, the proportion of GISP isolates that were resistant to ciprofloxacin continued to increase quite markedly and was 20.2% in 2001 compared to 14.3% in 2000. Also, in 2001, increased numbers of GISP isolates resistant to ciprofloxacin were identified in all four California GISP sites (3.0% in Long Beach, 2.3% in Orange County, 2.1% in San Diego, and 3.1% in San Francisco). As a result of these data, the 2002 CDC STD Treatment Guidelines³ recommend that fluoroquinolones not be used for treatment of gonorrhea acquired in Asia, the Pacific Islands, including Hawaii, or in other areas with high levels of resistance such as California. See **Appendix** for a further description of GISP.

Data on characteristics of patients in the GISP sample have been used to describe trends in the sexual orientation of male STD clinic patients with gonorrhea. In 2001, there was a marked increase in the proportion of GISP isolates from men who have sex with men (MSM), with 17.2% of isolates from MSM compared with 13.9% in 2000 and 13.1% in 1999 (Figure CC). In 1988, only 4.0% of isolates were from MSM. The proportional increase in MSM in GISP has corresponded to an absolute increase in gonorrhea cases among MSM at STD clinics in several large cities that participate in GISP.

Syphilis

The rate of primary and secondary (P&S) syphilis reported in the United States decreased during the 1990s and in 2000 was the lowest since reporting began in 1941. The low rate of syphilis and the concentration of the majority of syphilis cases in a small number of geographic areas led to the development of the National Plan to Eliminate Syphilis from the United States, which was announced by the Surgeon General in October 1999.⁴ The rate of P&S syphilis in the United States declined by 89.2% from 1990 through 2000. However, the rate of P&S syphilis increased slightly in 2001 (the first annual rate increase since 1990); this increase was observed only in men.

Despite continued national progress toward syphilis elimination among women and African-Americans, syphilis remains an important problem in the South and, increasingly, in some urban areas with large populations of MSM. Recently, outbreaks of syphilis among MSM have been reported, possibly reflecting increases in risky behavior in this population.

In 2001, P&S syphilis cases reported to CDC increased to 6,103 from 5,979 in 2000, an increase of 2.1%. The overall reported rate of P&S syphilis in the United States in 2001 (2.2 cases per 100,000 population) was slightly above the rate reported in 2000 (2.1 cases per 100,000), and was substantially higher than the Healthy People 2010 (HP2010) objective of 0.2 cases per 100,000 population (Figure 21, Table 1). The rate of P&S syphilis among women decreased from 1.7 cases per 100,000 population in 2000 to 1.4 cases per 100,000 population in 2001; among men, the rate increased from 2.6 to 3.0 cases per 100,000 population (Tables 28 and 29).

One factor that greatly facilitates syphilis elimination efforts is that this disease continues to be primarily reported only in specific areas of the country. In 2001, 2,516 (80.2%) of the 3,139 counties in the United States reported no cases of P&S syphilis (see **Appendix** for details on county coding). Half of all the P&S syphilis cases were reported from only 20 counties and one city (0.7% of total number of U.S. counties) (Table 26). However, the 2001 P&S syphilis rates were greater than the HP2010 objective in 606 counties (19.3% of the total number of U.S. counties). These 606 counties accounted for more than 99.6% of all reported P&S syphilis cases. Sixty-seven percent (403 out of 606) of these counties are located in the southern part of the United States (Figure KK). These data suggest that comprehensive syphilis prevention efforts focused in the South could markedly reduce the number of syphilis cases occurring in the United States.

Between 2000 and 2001, the national rate of congenital syphilis decreased by 20.7%, from 14.0 to 11.1 cases per 100,000 live births (Table 42). The continuing reduction in congenital syphilis rates, occurring since the early 1990s, reflects the substantial and continuing reduction in the rate of P&S syphilis among women over the same period. In 2001, approximately one half of the states and outlying areas had a reported rate of congenital syphilis that was greater than the HP2010 objective of 1.0 case per 100,000 live births (Table 41).

Although wide disparities exist in the reported rates of STDs among racial and ethnic groups, there has been a reduction in these differences for syphilis over the past five years. The P&S syphilis rate reported for 2001 among African-Americans was 16 times the rate reported among whites, reflecting a substantial decline from 1997, when the rate among African-Americans was 44 times greater than that among whites (Table 35B).

While syphilis elimination efforts have successfully focused on heterosexual minority populations at risk for syphilis, recent increases in syphilis among MSM highlight the importance of continually reassessing and refining surveillance, prevention, and control strategies.

¹ Institute of Medicine. *The Hidden Epidemic: Confronting Sexually Transmitted Diseases*, Committee on Prevention and Control of Sexually Transmitted Diseases, National Academy Press, Washington, DC, 1997.

² National Committee for Quality Assurance (NCQA). *HEDIS 2000: Technical Specifications*, Washington, DC, 1999, pp. 68-70, 285-286.

³ Centers for Disease Control and Prevention. Sexually transmitted diseases treatment guidelines 2002. *MMWR* 2002;51 (No. RR-6)

⁴ Division of STD Prevention. *The National Plan to Eliminate Syphilis from the United States*. National Center for HIV, STD, and TB Prevention, Centers for Disease Control and Prevention, 1999.